

Histiocytic Sarcoma

Histiocytic sarcoma is most commonly diagnosed in Bernese Mountain Dogs, Flat Coated Retrievers, Golden Retrievers and Rottweilers. This disease may be localized to an area, or disseminated (i.e involving several areas including the lungs, spleen, lymph nodes, and bone marrow), and a patient's clinical signs are dependent on the location of their disease.

The first step when a patient is diagnosed with histiocytic sarcoma is to determine the extent of their disease, which is called staging. This involves several tests to determine the best and most appropriate treatment options. Staging includes bloodwork with a complete blood count, chemistry panel and urinalysis. Chest radiographs to evaluate for any evidence of disease in the lungs, and an ultrasound to evaluate for disease within the abdomen. Aspirates of any regional lymph nodes are performed in some situations as well as a bone marrow aspirate. If a patient presents with lameness, then radiographs of that affected limb are also recommended and the area may be sampled with a needle aspirate to determine if it is related.

Treatment options are largely dependent on the extent of disease.



- For patients with a localized tumor of the limb that has not spread, options include:
 - Surgery (typically amputation) is performed and followed up with chemotherapy. Dogs that undergo surgery and chemotherapy have an average survival time of 6-12 months.
 - If surgery is not pursued, then radiation therapy has been shown to be effective in improving discomfort associated with the tumor as well as decreasing the tumor burden. Radiation therapy is used in one of two ways: definitive and palliative.
 - Definitive radiation therapy involves a daily treatment, Monday-Friday, for 15-17 treatments. Since a patient needs to be perfectly still for the radiation to be delivered exactly where it needs to go, each patient is placed under a very short general anesthesia. Due to the need for anesthesia, each patient needs to be fasted prior to each treatment. Side effects are dependent on the location treated, and are usually short lived. These side effects typically include hair loss, redness of the skin that progresses to a moderate sunburn that starts to occur during the second week of treatment and continue for a short time after the therapy is completed. Fortunately, most side effects start to improve within 1-2 weeks of finishing treatment and require minimal supportive care. The goal of definitive radiation therapy is to help control the disease and improve your pet's quality of life.

- Palliative radiation therapy is strictly done to help with discomfort and is not aimed at controlling the tumor. This treatment option typically involves a once to twice a week treatment for 3-4 weeks in a row. Side effects are most often limited to hair loss, but again it depends on the location that is being radiated.
- Comfort care with pain medications. This can be an option that is used alone or with any of the above options. Most of the time an anti-inflammatory and a pain medication will be prescribed to start and then we can add in additional medications or adjust doses as needed.
- For patients with disseminated disease, the mainstay of treatment is chemotherapy with a drug called Lomustine (CCNU). This is an oral chemotherapy agent that is administered in the hospital once every 3 weeks. Fortunately, most patients tolerate chemotherapy well with roughly 10% of patients treated experiencing any significant side effects. Signs to watch for include stomach upset (nausea, vomiting, diarrhea, decrease or loss of appetite and lethargy) the first week of treatment. CCNU can also cause the white blood cell count to be lowered. It also has the potential to cause toxicity to the liver, so most patients are placed on a supplement called Denamarin to try and help protect the liver. Bloodwork is required when on this medication to monitor their blood counts and organ function and ensure they are tolerating the medication well. Palliative radiation therapy can also be pursued for this form of the disease and the goal is to help improve their quality of life. For patients with disseminated histiocytic sarcoma, the median survival time is 4-6 months with treatment.

Our top priority will always be the patients' quality of life. If any treatment is causing a decrease in quality of life, then we will re-evaluate and determine if changes to the protocol or discontinuation of therapy is needed.